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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/568,642

02/16/2006

Paul Ullmann

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EXAMINER

MEI, XU

ART UNIT

PAPER NUMBER

2614

MAIL DATE

DELIVERY MODE

11/12/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/568,642 | ULLMANN, PAUL | |
| | Examiner | Art Unit | |
| | Xu Mei | 2614 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/13/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to the applicant's application filed 02/16/2006.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4, 8 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claimed limitation "can be" in claims 4, 8 and 20 is not a positive limitation.

Claim 20 recites "a receiving loudspeaker according to claim 14", however, claim 14 recites "a transmitting loudspeaker with signal receiving means". It is therefore deemed the recited limitation "a receiving loudspeaker" is lacked antecedent basis as in the claim. It is in this office action that the limitation as recited in claim 20 are interpreted according to "the transmitting loudspeaker" as per claim 14.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

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granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-10, 12 and 14-19 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Nakatsugawa (US-6,741,708).

Regarding claims 1, 6-7, 14 and 17, Nakatsugawa in Fig. 1 discloses an A/V system with distributed sound output units or loudspeakers (31, 37, 43, 49, 55) and an A/V playback unit 21 for wireless audio signals transmission and reception of the modulated sound signals (i.e., ultrasonic signals together with the audio signals) as claimed. A transmitting loudspeaker as per claim 14 is shown in Fig. 2A, and a receiving loudspeaker as per claim 17 is shown in Fig. 2B.

Regarding claim 2, encoder 81 of Fig. 2A is a transforming means as claimed.

For what's called for in claims 3-5, 8 and 15, see Fig. 1.

Regarding claims 9-10, and 19, see col. 3, lines 1-13.

Regarding claims 12, 16 and 18, see col. 6, lines 10-33.

Regarding claim 20, see microphone 85 of Fig. 2A, and a microphone amplifier is inherently included in the input interface 83 for amplifier the receiving microphone signal.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakatsugawa in view of Schotz et al (US-5,673,323, hereafter, Schotz).

Regarding claim 11, Nakatsugawa disclosed an A/V play back unit as discussed above. What's not shown by Nakatsugawa is a low-pass filter for filtering specific frequency range of audio component as claimed. Schotz discloses a wireless speaker system in the same field of endeavor including transforming means (i.e., multiplexing) that having low pass filtering for audio components to filter out any signal components that is higher than 20 kHz (see Fig. 2, low pass filter 50A and 50B, and col. 3, line 66- col 4, line 8) to prevent signal interference. It would have been obvious to one of ordinary skill in the art to modify the A/V playback unit of Nakatsugawa by including low pass filtering for audio components in the signal transforming means in order to prevent signal interference, as taught by Schotz.

Regarding claim 13, frequency mirroring and frequency shifting for audio channel is taught in audio signal multiplexing circuit of transmitter in Fig. 2 of Schotz.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mlodzikowski et al, Akerman et al, Harrison et al, Daryanani, Sauders are made of record here as pertinent art to the claimed invention. The cited references above disclose various wireless loudspeaker systems.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xu Mei whose telephone number is 571-272-7523. The examiner can normally be reached on maxi flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Xu Mei/
Primary Examiner, Art Unit 2614
10/29/2008